

ABSTRACT OF THE DISCLOSURE

The present invention provides an inductive element and a method making an inductive element for surface mounting on an adjacent structure that has improved heat transfer characteristics. Specifically, the present invention includes an inductive element where the core and winding define coplanar surfaces that can then be mated to an adjacent structure, preferably a printed circuit board. Devices such as inductors or transformers including the inventive inductive element have multiple, low thermal resistance conductive paths for removing heat from the core and thereby enhance the heat transfer characteristics of the inductive element. The inductive element is particularly well suited for power electronics, such as for use a power choke or as part of a power transformer.